FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) RENEWAL OFFICE OF AIR QUALITY

Vectren Corporation, d.b.a Indiana Gas Company, Incorporated
3592 East Boltinghouse Road
Bloomington, Indiana 47408

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F 105-14156-00017	
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: September 13, 2 001 Expiration Date: September 13, 2006

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in Conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary engine driven compressor station source.

Authorized Individual:	William Doty, Vice President
Source Address:	3592 East Boltinghouse Road, Bloomington, Indiana 47408
Mailing Address:	20 NW Fourth St., Evansville, Indiana 47708
General Source Phone Number:	(812) 491-4562
SIC Code:	4924
County Location:	Monroe
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) 1100 brake horsepower, four (4) cycle natural-gas fired, clean burn reciprocating internal combustion engine, identified as CE-1, with a natural gas compressor.

(b) One (1) 2000 brake horsepower, four (4) cycle natural gas-fired, clean burn reciprocating internal combustion engine, identified as CE-2, with an intercooler, prechambered cylinder head and natural gas compressor.

(c) One (1) natural gas desulfurization process, consisting of:

(1) Two (2) enclosed amine contact towers, with H_2S emissions from the natural gas routed to the flare (IF-4).

(2) Two (2) natural gas-fired reboilers, identified as FCU-4 and FCU-5, each with a heat input capacity of 2.5 million British thermal units per hour, and exhausting to stacks FCU-4 and FCU-5.

(3) One (1) natural gas-fired flare, identified as IF-4, heat input capacity: 0.25 million British thermal units per hour.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million British thermal units per hour:

(1) Three (3) natural gas-fired reboilers used for glycol dewatering system, identified as FCU-1, FCU-2 and FCU-3, heat input capacities: 0.325, 0.75 and 0.375 million British thermal units per hour, respectively.

(2) One (1) natural gas-fired flare used for the glycol dewatering system, identified as IF-1, heat input capacity: 0.250 million British thermal units per hour.

(b) Combustion source flame safety purging on startup.

(c) The following VOC and HAP storage containers: Storage tanks with capacities less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(d) The following VOC and HAP storage containers: Vessels storing lubricating oil, hydraulic oils, machining oils and machining fluids.

(e) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.

(f) Closed loop heating and cooling systems.

(g) Heat exchanger cleaning and repair.

(h) Process vessel degassing and cleaning to prepare for internal repairs.

(i) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks and fluid handling equipment.

(j) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(k) Purge double block and bleed valves.

(l) Filter or coalescer media changeout.

(m) Numerous valves and flanges.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permit Conditions

(a) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued.

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

B.2 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2, and 326 IAC 2-7) shall prevail.

B.3 Permit Term [326 IAC 2-8-4(2)]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.4 Enforceability [326 IAC 2-8-6]

(a) Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM , the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.6 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)] [326 IAC 2-8-5(a)(4)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual"

as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality.[326 IAC 2-8-4(5)(E)]

(c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:

(1) Enforcement action;

(2) Permit termination, revocation and reissuance, or modification; and

(3) Denial of a permit renewal application.

(b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.

(c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs), including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

(b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

B.14 Emergency Provisions [326 IAC 2-8-12]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section),
or
Telephone No.: 317-233-5674 (ask for Compliance Section)
Facsimile No.: 317-233-5967

Failure to notify IDEM, OAQ, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report.

The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

(2) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

(c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-8-9]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15]

(a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-8-15(b), (c)(1), and (d).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

(c) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).

(d) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

B.20 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-11(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16]

(a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action, or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(c) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3(a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(d)(3), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Testing Requirements [326 IAC 2-8-4(3)]

C.9 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ, not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.10 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance

with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented upon issuance of this permit. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.12 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

(a) A compliance schedule for meeting the requirements of 40 CFR 68; or

(b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP).

All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.14 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years.

The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.15 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC2-1.1-1(1).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(d) Unless otherwise specified in this permit, any quarterly or semi-annual report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The reports do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) Reporting periods are based on calendar years.

Stratospheric Ozone Protection

C.16 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156

(b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

(a) One (1) 1100 brake horsepower, four (4) cycle natural-gas fired, clean burn reciprocating internal combustion engine, identified as CE-1, with a natural gas compressor.

(b) One (1) 2000 brake horsepower, four (4) cycle natural gas-fired, clean burn reciprocating internal combustion engine, identified as CE-2, with an intercooler, prechambered cylinder head and natural gas compressor.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 FESOP Emission Limitations and PSD Minor Source [326 IAC 2-8-4][326 IAC 2-2]

(a) The throughput of natural gas delivered to the two (2) engines (CE-1 and CE-2) shall be limited to less than a total of 46.37 million cubic feet (47,304 million British thermal units) per consecutive twelve (12) month period, the natural gas heating value shall not exceed 1,020 British thermal units per cubic feet, and the NO_X emission rate shall not exceed 4.08 pounds per million British thermal units. This will limit the potential to emit NO_X from the two (2) engines to less than 96.5 tons per year and total source potential to emit NO_X to less than 100 tons per year. These limits will also limit the potential to emit PM_{10} from the two (2) engines to less than 0.002 tons per year, the potential to emit SO_2 from the two (2) engines to less than 0.014 tons per year, the potential to emit VOC from the two (2) engines to less than 2.79 tons per year and the potential to emit CO from the two (2) engines to less than 7.50 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) are not applicable.

(b) Pursuant to FESOP F105-6133-00017, issued on December 13, 1996, the two (2) engines (CE-1 and CE-2) shall use natural gas only.

D.1.2 Condition Not Applicable

Condition D.1.1 of F 105-6133-00017, issued on December 13, 1996, which states, "The total combined natural gas delivered to the two (2) engines (CE-1 and CE-2) for combustion shall not exceed 62.0 million cubic feet (MMCF) per twelve (12) consecutive month period. This is equivalent to limiting NO_X emissions to 91.7 tons per year. Therefore, the requirements of 326 IAC 2-7 do not apply. This limitation will also satisfy the requirement to limit all other regulated pollutants below the Title V permitting threshold," is no longer applicable because, due to a change in the AP-42 emission factors for this process, the natural gas throughput must be limited as required by Condition D.1.1 of this FESOP. Therefore, Condition D.1.1 of F 105-6133-00017, issued on December 13, 1996, is hereby rescinded.

D.1.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements

There are no specific Compliance Determination Requirements applicable to these emission units.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

There are no specific Compliance Monitoring Requirements applicable to these emission units.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.4 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain records of the natural gas delivered to the two (2) engines (CE-1 and CE-2). The Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the NO_X emission limit established in Condition D.1.1.

(1) The amount and heating value of the natural gas delivered to the two (2) engines each month; and

(2) NO_X emissions from the total of the two (2) engines.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.5 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

(c) One (1) natural gas desulfurization process, consisting of:

(1) Two (2) enclosed amine contact towers, with H_2S emissions from the natural gas routed to the flare (IF-4).

(2) Two (2) natural gas-fired reboilers, identified as FCU-4 and FCU-5, each with a heat input capacity of 2.5 million British thermal units per hour, and exhausting to stacks FCU-4 and FCU-5.

(3) One (1) natural gas-fired flare, identified as IF-4, heat input capacity: 0.25 million British thermal units per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 FESOP Emission Limitations and Minor PSD Source [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to the First Significant Permit Revision, 105-11259, issued on October 28, 1999, the total combined throughput of natural gas desulfurized in the two (2) amine contact towers shall not exceed 4,575 million cubic feet per twelve (12) consecutive month period. This will limit the SO_2 from the desulfurization process to 89.4 tons per year, and the total potential to emit SO_2 to 89.4 tons per year from the entire source. Since the limited potential to emit SO_2 is less than 100 tons per year, the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration) do not apply.

D.2.2 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to this facility except when otherwise specified in 40 CFR Part 60, Subpart LLL.

D.2.3 New Source Performance Standard (NSPS) for Onshore Natural Gas Processing [326 IAC 12][40 CFR 60.640, Subpart LLL]

Any change or modification that increases the design capacity of this desulfurization process to two (2) long tons per day (LT/D) or more of hydrogen sulfide (H_2S) in the acid gas (expressed as sulfur), shall cause the facility to become subject to the requirements of 40 CFR 60.642 through 60.646.

D.2.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

Compliance Determination Requirements

There are no specific Compliance Determination Requirements applicable to these emission units.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

There are no specific Compliance Monitoring Requirements applicable to these emission units.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.5 Record Keeping Requirements

(a) To document compliance with Condition D.2.1, the Permittee shall maintain records of the natural gas processed in the two (2) amine contact towers. The Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO_2 emission limit established in Condition D.2.1.

(1) The amount of the natural gas processed in the two (2) amine contact towers each month; and

(2) SO_2 emissions from the desulfurization process.

(b) Pursuant to 40 CFR 60.647(c), to certify that a facility is exempt from the control requirements of 40 CFR 60.642 through 60.646, the owner or operator shall keep, for the life of the facility, an analysis demonstrating that the facility's design capacity is less than 2 LT/D of hydrogen sulfide (H_2S) expressed as sulfur.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.6 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million British thermal units per hour:

(1) Three (3) natural gas-fired reboilers used for glycol dewatering system, identified as FCU-1, FCU-2 and FCU-3, heat input capacities: 0.325, 0.75 and 0.375 million British thermal units per hour, respectively.

(2) One (1) natural gas-fired flare used for the glycol dewatering system, identified as IF-1, heat input capacity: 0.250 million British thermal units per hour.

(b) Combustion source flame safety purging on startup.

(c) The following VOC and HAP storage containers: Storage tanks with capacities less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(d) The following VOC and HAP storage containers: Vessels storing lubricating oil, hydraulic oils, machining oils and machining fluids.

(e) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.

(f) Closed loop heating and cooling systems.

(g) Heat exchanger cleaning and repair.

(h) Process vessel degassing and cleaning to prepare for internal repairs.

(i) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks and fluid handling equipment.

(j) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(k) Purge double block and bleed valves.

(l) Filter or coalescer media changeout.

(m) Numerous valves and flanges.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

There are no conditions specifically applicable to these facilities.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated
Source Address: 3592 East Boltinghouse Road, Bloomington, Indiana 46204
Mailing Address: 20 NW Fourth St., Evansville, Indiana 47708
FESOP No.: F105-14156-00017

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

9 Annual Compliance Certification Letter

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Affidavit (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Phone:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated
Source Address: 3592 East Boltinghouse Road, Bloomington, Indiana 46204
Mailing Address: 20 NW Fourth St., Evansville, Indiana 47708
FESOP No.: F105-14156-00017

This form consists of 2 pages **Page 1 of 2**

9 This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH

FESOP Quarterly Report

Source Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated
Source Address: 3592 East Boltinghouse Road, Bloomington, Indiana 46204
Mailing Address: 20 NW Fourth St., Evansville, Indiana 47708
FESOP No.: F105-14156-00017
Facility: Two (2) internal combustion engines (CE-1 and CE-2)
Parameter: Natural gas throughput
Limit: Less than 46.37 million cubic feet per consecutive twelve (12) month period, total

YEAR: _____

Month	Natural gas throughput (million cubic feet)	Natural gas throughput (million cubic feet)	Natural gas throughput (million cubic feet)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH

FESOP Quarterly Report

Source Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated
Source Address: 3592 East Boltinghouse Road, Bloomington, Indiana 46204
Mailing Address: 20 NW Fourth St., Evansville, Indiana 47708
FESOP No.: F105-14156-00017
Facility: One (1) natural gas desulfurization process
Parameter: Throughput of natural gas desulfurized in the two (2) amine contact towers
Limit: No more than 4,575 million cubic feet per twelve (12) consecutive month period, total

YEAR: _____

Month	Natural gas throughput (million cubic feet)	Natural gas throughput (million cubic feet)	Natural gas throughput (million cubic feet)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated
Source Address: 3592 East Boltinghouse Road, Bloomington, Indiana 46204
Mailing Address: 20 NW Fourth St., Evansville, Indiana 47708
FESOP No.: F105-14156-00017

Months: _____ to _____ Year: _____

This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: ______________________

Form Completed By: ______________________________________

Title/Position: ____

Date: ____

Phone: ____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the
Technical Support Document for Federally Enforceable State Operating Permit (FESOP) Renewal

Source Background and Description

Source Name:	**Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated**
Source Location:	**3592 East Boltinghouse Road, Bloomington, Indiana 46204**
County:	**Monroe**
SIC Code:	**4924**
Operation Permit No.:	**F 105-14156-00017**
Permit Reviewer:	**CarrieAnn Ortolani/MES**

On July 30, 2001, the Office of Air Quality (OAQ) had a notice published in The Herald Times, Bloomington, Indiana, stating that Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, had applied for a Federally Enforceable State Operating Permit (FESOP) Renewal to operate a stationary engine driven compressor station source. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, the OAQ has decided to make changes to the FESOP. The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded)**:

Change 1:

Condition B.10 (Compliance with Permit Conditions) has been revised to clarify that noncompliance with any requirement of this permit may result in an enforcement action against the Permittee, an action to modify, revoke, reissue or terminate the source's permit, and/or a denial of the Permittee's application to renew the permit as follows:

B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit~~, except those specifically designated as not federally enforceable,~~ is grounds for:

(1) Enforcement action;

(2) Permit termination, revocation and reissuance, or modification; and

(3) Denial of a permit renewal application.

(b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in condition B, Emergency Provisions.

Change 2:

Condition B.20 has had the words “by the requirements of” added as follows:

B.20 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed **by the requirements of** 326 IAC 2 and 326 IAC 2-8-11.1.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD)
for a Federally Enforceable State Operating Permit (FESOP) Renewal

Source Background and Description

Source Name:	**Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated**
Source Location:	**3592 East Boltinghouse Road, Bloomington, Indiana 46204**
County:	**Monroe**
SIC Code:	**4924**
Operation Permit No.:	**F 105-14156-00017**
Permit Reviewer:	**CarrieAnn Ortolani/MES**

The Office of Air Quality (OAQ) has reviewed a FESOP renewal application from Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated relating to the operation of an engine driven compressor station. Vectren Corporation, d.b.a. Indiana Gas Company, Inc. was issued FESOP F105-6133-00017, on December 13, 1996 that will expire on December 13, 2001. At that time, the name of the company was Indiana Gas Company, Inc., Dolan Storage Field.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) One (1) 1100 brake horsepower, four (4) cycle natural-gas fired, clean burn reciprocating internal combustion engine, identified as CE-1, with a natural gas compressor.

(b) One (1) 2000 brake horsepower, four (4) cycle natural gas-fired, clean burn reciprocating internal combustion engine, identified as CE-2, with an intercooler, prechambered cylinder head and natural gas compressor.

(c) One (1) natural gas desulfurization process, consisting of:

(1) Two (2) enclosed amine contact towers, with H_2S emissions from the natural gas routed to the flare (IF-4).

(2) Two (2) natural gas-fired reboilers, identified as FCU-4 and FCU-5, each with a heat input capacity of 2.5 million British thermal units per hour, and exhausting to stacks FCU-4 and FCU-5.

(3) One (1) natural gas-fired flare, identified as IF-4, heat input capacity: 0.25 million British thermal units per hour.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million British thermal units per hour:

(1) Three (3) natural gas-fired reboilers used for glycol dewatering system, identified as FCU-1, FCU-2 and FCU-3, heat input capacities: 0.325, 0.75 and 0.375 million British thermal units per hour, respectively.

(2) One (1) natural gas-fired flare used for the glycol dewatering system, identified as IF-1, heat input capacity: 0.250 million British thermal units per hour.

(b) Combustion source flame safety purging on startup.

(c) The following VOC and HAP storage containers: Storage tanks with capacities less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(d) The following VOC and HAP storage containers: Vessels storing lubricating oil, hydraulic oils, machining oils and machining fluids.

(e) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.

(f) Closed loop heating and cooling systems.

(g) Heat exchanger cleaning and repair.

(h) Process vessel degassing and cleaning to prepare for internal repairs.

(i) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks and fluid handling equipment.

(j) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(k) Purge double block and bleed valves.

(l) Filter or coalescer media changeout.

(m) Numerous valves and flanges.

Existing Approvals

(a) F105-6133-00017, issued on December 13, 1996; and

(b) First Significant Permit Revision 105-11259, issued on October 28, 1999.

All conditions from previous approvals were incorporated into this FESOP except the following:

F105-6133-00017, issued on December 13, 1996 and expiring on December 13, 2001

Condition D.1.1, “The total combined natural gas delivered to the two (2) engines (CE-1 and CE-2) for combustion shall not exceed 62.0 million cubic feet (MMCF) per twelve (12) consecutive month period. This is equivalent to limiting NO_X emissions to 91.7 tons per

year. Therefore, the requirements of 326 IAC 2-7 do not apply. This limitation will also satisfy the requirement to limit all other regulated pollutants below the Title V permitting threshold."

Reason not incorporated: Due to a change in the AP-42 emission factors for this process, the natural gas throughput must be limited to less than a total of 46.37 million cubic feet (47,304 million British thermal units) per consecutive twelve (12) month period, the natural gas heating value shall not exceed 1,020 British thermal units per cubic feet, and the NO_X emission rate shall not exceed 4.08 pounds per million British thermal units, as required by Condition D.1.1 of this proposed FESOP. This will limit the potential to emit NO_X from the two (2) engines to less than 96.5 tons per year and total source potential to emit NO_X to less than 100 tons per year. These limits will also limit the potential to emit PM_{10} from the two (2) engines to less than 0.002 tons per year, the potential to emit SO_2 from the two (2) engines to less than 0.014 tons per year, the potential to emit VOC from the two (2) engines to less than 2.79 tons per year and the potential to emit CO from the two (2) engines to less than 7.50 tons per year. Therefore, the requirements of 326 IAC 2-7, Part 70, are still not applicable.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the FESOP Renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete FESOP renewal application for the purposes of this review was received on March 12, 2001. Additional information was received on May 4, 2001.

There was no notice of completeness letter mailed to the source.

Emission Calculations

See pages 1 through 3 of 3 of Appendix A of this document for detailed emissions calculations.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source, excluding the emission limits that were contained in the previous FESOP.

Pollutant	**Unrestricted Potential Emissions** (tons/year)
PM	less than 100
PM_{10}	less than 100
SO_2	greater than 250
VOC	less than 100

Pollutant	Unrestricted Potential Emissions (tons/year)
CO	less than 100
NO_X	greater than 250

Note: For the purpose of determining Title V applicability for particulates, PM_{10}, not PM, is the regulated pollutant in consideration.

HAPs	Unrestricted Potential Emissions (tons/year)
1,1,2,2-Tetrachloroethane	0.005
1,1,2-Trichloroethane	0.004
1,1-Dichloroethane	0.003
1,2-Dichloroethane	0.003
1,2-Dichloropropane	0.004
1,3-Butadiene	0.036
1,3-Dichloropropene	0.004
2,2,4-Tromethylpentane	0.034
Acetaldehyde	1.12
Acrolein	0.691
Benzene	0.059
Biphenyl	0.029
Carbon Tetrachloride	0.005
Chlorobenzene	0.004
Chloroethane	0.0003
Chloroform	0.004
Ethylbenzene	0.005
Ethylene Dibromide	0.006
Formaldehyde	7.10
Methanol	0.336
Methylene Chloride	0.003
n-Hexane	0.190
Naphthalene	0.010
Phenol	0.003

HAPs	Unrestricted Potential Emissions (tons/year)
Styrene	0.003
Toluene	0.055
Vinyl Chloride	0.0002
Xylene	0.025
Dichlorobenzene	0.00003
Lead	0.00001
Cadmium	0.00003
Chromium	0.00003
Manganese	0.000009
Nickel	0.00005
TOTAL	9.75

(a) The unrestricted potentials to emit (as defined in 326 IAC 2-1.1-1(16)) of SO_2 and NO_X are equal to or greater than 100 tons per year. Therefore, the source can be subject to the provisions of 326 IAC 2-7.

(b) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD applicability.

Potential to Emit After Issuance

The source, issued a FESOP on December 13, 1996, has opted to remain a FESOP source, rather than apply for a Part 70 Operating Permit. The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered enforceable only after issuance of this Federally Enforceable State Operating Permit and only to the extent that the effect of the control equipment is made practically enforceable in the permit. The source's potential to emit is based on the emission units included in the original FESOP and the First Significant Permit Revision to the FESOP. (F 105-6133-00017; issued on December 13, 1996 and SPR 105-11259, issued on October 28, 1999). Due to a re-evaluation of the AP-42 emission factors for reciprocating engines, the limitations in the permit have been revised so that the source-wide NO_X emissions are limited to less than 100 tons per year. The source has accepted a more conservative limit in order to continue to comply with the requirements of 326 IAC 2-8, FESOP.

	Potential to Emit After Issuance (tons/year)						
Process/emission unit	**PM**	**PM_{10}**	**SO_2**	**VOC**	**CO**	**NO_X**	**HAPs**
Two (2) four stroke clean burn engines (CE-1 and CE-2)	0.234	0.002	0.014	2.79	7.50	96.5	1.71
One (1) desulfurization process	0.044	0.174	89.4	0.126	1.93	2.30	0.043
Insignificant Activities	0.022	0.087	0.007	1.00	0.966	1.15	less than 1.00
Total PTE After Issuance	0.300	0.263	89.4	3.92	10.4	less than 100	Single <10 Total <25

County Attainment Status

The source is located in Monroe County.

Pollutant	**Status** (attainment, maintenance attainment or unclassifiable; severe, moderate, marginal, or nonattainment)
PM_{10}	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_X) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Monroe County has been designated as attainment or unclassifiable for ozone.

(b) Monroe County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Federal Rule Applicability

(a) The desulfurization process is subject to the requirements of the New Source Performance Standard (NSPS) for Onshore Natural Gas Processing. Pursuant to 40 CFR 60.640, Subpart LLL, the provisions of this subpart are applicable to each sweetening unit, and each sweetening unit followed by a sulfur recovery unit located on land and include facilities

located onshore which process natural gas produced from either onshore or offshore wells which commences construction or modification after January 20, 1984. Since this facility has a design capacity less than two (2) long tons per day (LT/D) of hydrogen sulfide (H_2S) in the acid gas (expressed as sulfur), the facility is required to comply with Sec. 60.647(c), but is not required to comply with Sections 60.642 through 60.646. Pursuant to 40 CFR 60.647(c), to certify that a facility is exempt from the control requirements of these standards, the owner or operator shall keep, for the life of the facility, an analysis demonstrating that the facility's design capacity is less than 2 LT/D of hydrogen sulfide (H_2S) expressed as sulfur.

(b) There are still no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR 61 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because the potentials to emit NO_X and SO_2 are limited to less than one hundred (100) tons per year.

326 IAC 2-8-4 (FESOP) and 326 IAC 2-2 (PSD)

Pursuant to this rule, the potential to emit of $PM_{10,}$ SO_2, VOC, CO and NO_X shall be limited to less than one hundred (100) tons per year. In addition, the potential to emit of each individual HAP shall be limited to less than ten (10) tons per year and the combination of all HAPs shall be limited to less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 2-7, do not apply. Since the potential to emit PM is less than 250 tons per year, these limitations will also make the requirements of 326 IAC 2-2 (PSD) not applicable.

(a) The throughput of natural gas delivered to the two (2) engines (CE-1 and CE-2) shall be limited to less than a total of 46.37 million cubic feet (47,304 million British thermal units) per consecutive twelve (12) month period, the natural gas heating value shall not exceed 1,020 British thermal units per cubic feet, and the NO_X emission rate shall not exceed 4.08 pounds per million British thermal units. This will limit the potential to emit NO_X from the two (2) engines to less than 96.5 tons per year and total source potential to emit NO_X to less than 100 tons per year. These limits will also limit the potential to emit PM_{10} from the two (2) engines to less than 0.002 tons per year, the potential to emit SO_2 from the two (2) engines to less than 0.014 tons per year, the potential to emit VOC from the two (2) engines to less than 2.79 tons per year and the potential to emit CO from the two (2) engines to less than 7.50 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) are not applicable.

(b) Pursuant to FESOP F105-6133-00017, issued on December 13, 1996, the two (2) engines (CE-1 and CE-2) shall use natural gas only.

(c) Pursuant to the First Significant Permit Revision, 105-11259, issued on October 28, 1999, the total combined throughput of natural gas desulfurized in the two (2) amine contact towers shall not exceed 4,575 million cubic feet per twelve (12) consecutive month period. This will limit the SO_2 from the desulfurization process to 89.4 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration) do not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR Part 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

(a) The potential to emit SO_2 from the combination of the two (2) engines is less than twenty-five (25) tons per year and ten (10) pounds per hour. Therefore, the requirements of 326 IAC 7 are not applicable.

(b) The potential to emit SO_2 from the desulfurization process is greater than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 7-1.1-2 can be applicable. Since there is no coal or oil combustion at this facility, there are no applicable requirements in 326 IAC 7-1.1-2 for this facility.

Testing Requirements

There are still no emissions testing requirements in this permit.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are still no compliance monitoring requirements applicable to this source.

Conclusion

The operation of this engine driven compressor station shall be subject to the conditions of the attached proposed FESOP No.: F 105-14156-00017.

Appendix A: Emission Calculations
Natural Gas-fired Reciprocating Engines

Company Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated
Address City IN Zip: 3592 East Boltinghouse Road, Bloomington, Indiana 47408
FESOP Renewal: F 105-14156
Plt ID: 105-00017
Reviewer: CarrieAnn Ortolani
Date: March 12, 2001

Emissions calculated based on heat input capacity (MMBtu/hr)

Four stroke Lean Burn Engines (CE-1 and CE-2)
Heat Input Capacity
MM Btu/hr

30.7 Unrestricted potential emissions based on design capacity.

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	9.91E-03	7.71E-05	5.88E-04	4.08E+00	1.18E-01	3.17E-01
Potential Emission in tons/yr	1.33	0.010	0.079	549	15.9	42.6

Emissions calculated based on heat input capacity (MMBtu/hr)

Four stroke Lean Burn Engines (CE-1 and CE-2)
Heat Input Capacity
MM Btu/hr

7.21 Equivalent of limit in Old FESOP 105-6133-00017, operating at maximum allowable capacity for 8,760 hours per year and not exceeding the limit.

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	9.91E-03	7.71E-05	5.88E-04	4.08E+00	1.18E-01	3.17E-01
Potential Emission in tons/yr	0.313	0.002	0.019	129	3.73	10.0

Four stroke Lean Burn Engines (CE-1 and CE-2)
Heat Input Capacity
MM Btu/hr

5.40 Equivalent of limit in FESOP 105-14156, operating at the maximum allowable capacity for 8,760 hours per year to not exceed limit.

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	9.91E-03	7.71E-05	5.88E-04	4.08E+00	1.18E-01	3.17E-01
Potential Emission in tons/yr	0.234	0.002	0.014	96.5	2.79	7.50

HAP	Emission Factor four stroke lean burn engines (lb/MMBtu)	Unrestricted Potential Emissions (tons/yr)	Potential to Emit in old FESOP 105-6133-00017 (tons/yr)	Potential to Emit in FESOP 105-14156 (tons/yr)
1,1,2,2-Tetrachloroethane	4.00E-05	5.38E-03	1.26E-03	9.46E-04
1,1,2-Trichloroethane	3.18E-05	4.28E-03	1.00E-03	7.52E-04
1,1-Dichloroethane	2.36E-05	3.17E-03	7.45E-04	5.58E-04
1,2-Dichloroethane	2.36E-05	3.17E-03	7.45E-04	5.58E-04
1,2-Dichloropropane	2.69E-05	3.62E-03	8.49E-04	6.36E-04
1,3-Butadiene	2.67E-04	3.59E-02	8.43E-03	6.32E-03
1,3-Dichloropropene	2.64E-05	3.55E-03	8.34E-04	6.24E-04
2,2,4-Trimethylpentane	2.50E-04	3.36E-02	7.89E-03	5.91E-03
Acetaldehyde	8.36E-03	1.12E+00	2.64E-01	1.98E-01
Acrolein	5.14E-03	6.91E-01	1.62E-01	1.22E-01
Benzene	4.40E-04	5.92E-02	1.39E-02	1.04E-02
Biphenyl	2.12E-04	2.85E-02	6.69E-03	5.01E-03
Carbon Tetrachloride	3.67E-05	4.93E-03	1.16E-03	8.68E-04
Chlorobenzene	3.04E-05	4.09E-03	9.60E-04	7.19E-04
Chloroethane	1.87E-06	2.51E-04	5.91E-05	4.42E-05
Chloroform	2.85E-05	3.83E-03	9.00E-04	6.74E-04
Ethylbenzene	3.97E-05	5.34E-03	1.25E-03	9.39E-04
Ethylene Dibromide	4.43E-05	5.96E-03	1.40E-03	1.05E-03
Formaldehyde	5.28E-02	7.10E+00	1.67E+00	1.25E+00
Methanol	2.50E-03	3.36E-01	7.89E-02	5.91E-02
Methylene Chloride	2.00E-05	2.69E-03	6.32E-04	4.73E-04
n-Hexane	1.11E-03	1.49E-01	3.51E-02	2.63E-02
Naphthalene	7.44E-05	1.00E-02	2.35E-03	1.76E-03
Phenol	2.40E-05	3.23E-03	7.58E-04	5.68E-04
Styrene	2.36E-05	3.17E-03	7.45E-04	5.58E-04
Toluene	4.08E-04	5.49E-02	1.29E-02	9.65E-03
Vinyl Chloride	1.49E-05	2.00E-03	4.71E-04	3.52E-04
Xylene	1.84E-04	2.47E-02	5.81E-03	4.35E-03
	Total HAPs:	**9.71**	**2.28**	**1.71**

Methodology

Emission Factors are from AP 42 Tables 3.2-1, 3.2-2 and 3.2-3, revised July 2000

Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

Appendix A: Emissions Calculations
Desulfurization with
Natural Gas Combustion
MM BTU/HR <100

Company Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated
Address City IN Zip: 3592 East Boltinghouse Road, Bloomington, Indiana 47408
FESOP Renewal: F 105-14156
Plt ID: 105-00017
Reviewer: CarrieAnn Ortolani
Date: March 12, 2001

Two (2) reboilers

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
5.00	43.80

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.042	0.166	0.013	2.19	0.120	1.84

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

One (1) flare

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.250	2.19

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.002	0.008	0.001	0.110	0.006	0.092

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 3 for HAPs emissions calculations.

Process Emissions from Desulfurization

Daily H2S throughput based on maximum daily natural gas throughput capacity and maximum daily H2S content of fuel.

H2S (cubic ft. / MMCF natural gas)	Density H2S (lb/cubic ft.)	Maximum Natural Gas Throughput (MMCF/day)	H2S in the acid gas (tons/day)	H2S in the acid gas (LT/D)
400	0.0911	90	1.64	1.46

Annual SO2 emissions based on maximum annual average H2S content of the natural gas and annual natural gas throughput.

H2S (cubic ft. / MMCF natural gas)	Density H2S (lb/cubic ft.)	SO2 Emission Rate (lbs SO2/ lb H2S)	SO2 content in fuel (lbs SO2/MMCF)	Natural gas throughput (MMCF/yr)	SO2 Emissions (lbs/yr)	SO2 Emissions (tons/yr)
228	0.0911	1.88	39.1	4575	178873	89.4

Methodology
For daily H2S throughput in long tons per day (LT/D) = H2S content of fuel (cub. ft./ MMcf) x Density H2S (lb/cub. ft.) x Maximum natural gas throughput (MMcf/day) / 2000 lbs/short ton / 1.12 short tons/long ton
Annual SO2 emissions (tons/yr) = maximum annual average H2S content of fuel (cub. ft./ MMcf) x Density H2S (lb/cub. ft.) x SO2 emission rate (lbs SO2/ lb H2S) x S
This methodology was used during the permit revision review and has been determined to be accurate.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
HAPs Emissions

Company Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated
Address City IN Zip: 3592 East Boltinghouse Road, Bloomington, Indiana 47408
FESOP Renewal: F 105-14156
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HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	4.83E-05	2.76E-05	1.72E-03	4.14E-02	7.82E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel	Total
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	HAPs
Potential Emission in tons/yr	1.15E-05	2.53E-05	3.22E-05	8.74E-06	4.83E-05	0.043

Methodology is the same as page 2.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

demonstrate that a reciprocating compressor is in wet gas service to apply for the exemption in §60.633(f) shall be recorded in a log that is kept in a readily accessible location.

§60.636 Reporting requirements.

(a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of §60.487.

(b) An owner or operator shall include the following information in the initial semiannual report in addition to the information required in §60.487(b)(1)—(4): Number of pressure relief devices subject to the requirements of §60.633(b) except for those pressure relief devices designated for no detectable emissions under the provisions of §60.482–4(a) and those pressure relief devices complying with §60.482–4(c).

(c) An owner or operator shall include the following information in all semiannual reports in addition to the information required in §60.487(c)(2)(i) through (vi):

(1) Number of pressure relief devices for which leaks were detected as required in §60.633(b)(2) and

(2) Number of pressure relief devices for which leaks were not repaired as required in §60.633(b)(3).

Subpart LLL—Standards of Performance for Onshore Natural Gas Processing: SO_2 Emissions

SOURCE: 50 FR 40160, Oct. 1, 1985, unless otherwise noted.

§60.640 Applicability and designation of affected facilities.

(a) The provisions of this subpart are applicable to the following affected facilities that process natural gas: each sweetening unit, and each sweetening unit followed by a sulfur recovery unit.

(b) Facilities that have a design capacity less than 2 long tons per day (LT/D) of hydrogen sulfide (H_2S) in the acid gas (expressed as sulfur) are required to comply with §60.647(c) but are not required to comply with §§60.642 through 60.646.

(c) The provisions of this subpart are applicable to facilities located on land and include facilities located onshore which process natural gas produced from either onshore or offshore wells.

(d) The provisions of this subpart apply to each affected facility identified in paragraph (a) of this section which commences construction or modification after January 20, 1984.

(e) The provisions of this subpart do not apply to sweetening facilities producing acid gas that is completely reinjected into oil-or-gas-bearing geologic strata or that is otherwise not released to the atmosphere.

§60.641 Definitions.

All terms used in this subpart not defined below are given the meaning in the Act and in subpart A of this part.

Acid gas means a gas stream of hydrogen sulfide (H_2S) and carbon dioxide (CO_2) that has been separated from sour natural gas by a sweetening unit.

Natural gas means a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface. The principal hydrocarbon constituent is methane.

Onshore means all facilities except those that are located in the territorial seas or on the outercontinental shelf.

Reduced sulfur compounds means H_2S, carbonyl sulfide (COS), and carbon disulfide (CS_2).

Sulfur production rate means the rate of liquid sulfur accumulation from the sulfur recovery unit.

Sulfur recovery unit means a process device that recovers element sulfur from acid gas.

Sweetening unit means a process device that separates the H_2S and CO_2 contents from the sour natural gas stream.

Total SO_2 equivalents means the sum of volumetric or mass concentrations of the sulfur compounds obtained by adding the quantity existing as SO_2 to the quantity of SO_2 that would be obtained if all reduced sulfur compounds were converted to SO_2 (ppmv or kg/DSCM).

E = the sulfur emission rate expressed as elemental sulfur, kilograms per hour (kg/hr) rounded to one decimal place.

R = the sulfur emission reduction efficiency achieved in percent, carried to one decimal place.

S = the sulfur production rate in kilograms per hour (kg/hr) rounded to one decimal place.

X = the sulfur feed rate, i.e., the H_2S in the acid gas (expressed as sulfur) from the sweetening unit, expressed in long tons per day (LT/D) of sulfur rounded to one decimal place.

Y = the sulfur content of the acid gas from the sweetening unit, expressed as mole percent H_2S (dry basis) rounded to one decimal place.

Z = the minimum required sulfur dioxide (SO_2) emission reduction efficiency, expressed as percent carried to one decimal place. Z_i refers to the reduction efficiency required at the initial performance test. Z_c refers to the reduction efficiency required on a continuous basis after compliance with Z_i has been demonstrated.

§ 60.642 Standards for sulfur dioxide.

(a) During the initial performance test required by § 60.8(b), each owner or operator shall achieve at a minimum, an SO_2 emission reduction efficiency (Z_i) to be determined from Table 1 based on the sulfur feed rate (X) and the sulfur content of the acid gas (Y) of the affected facility.

(b) After demonstrating compliance with the provisions of paragraph (a) of this section, the owner or operator shall achieve at a minimum, an SO_2 emission reduction efficiency (Z_c) to be determined from Table 2 based on the sulfur feed rate (X) and the sulfur content of the acid gas (Y) of the affected facility.

Table 1. REQUIRED MINIMUM INITIAL SO_2 EMISSION REDUCTION EFFICIENCY (Z_i)

H_2S content of acid gas (Y), %	Sulfur feed rate (X), LT/D			
	2.0≤X≤5.0	5.0<X≤15.0	15.0<X≤300.0	X>300.0
Y≥50	79.0	$88.51X^{0.0101}Y^{0.0125}$ or 99.8, whichever is smaller		
20≤Y<50	79.0	$88.51X^{0.0101}Y^{0.0125}$ or 97.9, whichever is smaller		97.9
10≤Y<20	79.0	$88.51X^{0.0101}Y^{0.0125}$ or 93.5, whichever is smaller	93.5	93.5
Y<10	79.0	79.0	79.0	79.0

Table 2. REQUIRED MINIMUM SO_2 EMISSION REDUCTION EFFICIENCY (Z_c)

H_2S content of acid gas (Y), %	Sulfur feed rate (X), LT/D			
	2.0≤X≤5.0	5.0<X≤15.0	15.0<X≤300.0	X>300.0
Y≥50	74.0	$85.35X^{0.0144}Y^{0.0128}$ or 99.8, whichever is smaller		
20≤Y<50	74.0	$85.35X^{0.0144}Y^{0.0128}$ or 97.5, whichever is smaller		97.5
10≤Y<20	74.0	$85.35X^{0.0144}Y^{0.0128}$ or 90.8, whichever is smaller	90.8	90.8
Y<10	74.0	74.0	74.0	74.0

§ 60.643 Compliance provisions.

(a)(1) To determine compliance with the standards for sulfur dioxide specified in § 60.642(a), during the initial performance test as required by § 60.8, the

minimum required sulfur dioxide emission reduction efficiency (Z) is compared to the emission reduction efficiency (R) achieved by the sulfur recovery technology.

(i) If $R \geqq Z_i$, the affected facility is in compliance.

(ii) If $R < Z_i$, the affected facility is not in compliance.

(2) Following the initial determination of compliance as required by § 60.8, any subsequent compliance determinations that may be required by the Administrator would compare R to Z_c.

(b) The emission reduction efficiency (R) achieved by the sulfur reduction technology shall be determined using the procedures in § 60.644(c)(1).

[50 FR 40160, Oct. 1, 1985, as amended at 54 FR 6679, Feb. 14, 1989]

§ 60.644 Test methods and procedures.

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in paragraph § 60.8(b).

(b) During a performance test required by § 60.8, the owner or operator shall determine the minimum required reduction efficiencies (Z) of SO_2 emissions as required in § 60.642 (a) and (b) as follows:

(1) The average sulfur feed rate (X) shall be computed as follows:

$$X = K\ Q_a\ Y$$

where:

X=average sulfur feed rate, long ton/day.

Q_a=average volumetric flow rate of acid gas from sweetening unit, dscf/day.

Y=average H_2S concentration in acid gas feed from sweetening unit, percent by volume.

K=(32 lb S/lb-mole)/[(100%)(385.36 dscf/lb-mole)(2240 lb/long ton)]

$=3.707\times10^{-7}$

(2) The continuous readings from the process flowmeter shall be used to determine the average volumetric flow rate (Q_a) in dscf/day of the acid gas from the sweetening unit for each run.

(3) The Tutwiler procedure in § 60.648 or a chromatographic procedure following ASTM E–260 (incorporated by reference—see § 60.17) shall be used to determine the H_2S concentration in the acid gas feed from the sweetening unit. At least one sample per hour (at equally spaced intervals) shall be taken during each 4-hour run. The arithmetic mean of all samples shall be the average H_2S concentration (Y) on a dry basis for the run. By multiplying the result from the Tutwiler procedure by 1.62×10^{-3}, the units gr/100 scf are converted to volume percent.

(4) Using the information from paragraphs (b) (1) and (3), Tables 1 and 2 shall be used to determine the required initial (Z_i) and continuous (Z_c) reduction efficiencies of SO_2 emissions.

(c) The owner or operator shall determine compliance with the SO_2 standards in § 60.642 (a) or (b) as follows:

(1) The emission reduction efficiency (R) achieved by the sulfur recovery technology shall be computed for each run using the following equation:

$$R = (100\ S)/(S+E)$$

(2) The level indicators or manual soundings shall be used to measure the liquid sulfur accumulation rate in the product storage tanks. Readings taken at the beginning and end of each run, the tank geometry, sulfur density at the storage temperature, and sample duration shall be used to determine the sulfur production rate (S) in kg/hr for each run.

(3) The emission rate (E) of sulfur shall be computed for each run as follows:

$$E = C_e\ Q_{sd}/K$$

where:

C_e=concentration of sulfur equivalent (SO_2+TRS), g/dscm.

Q_{sd}=volumetric flow rate of effluent gas, dscm/hr.

K=conversion factor, 1000 g/kg.

(4) The concentration (C_e) of sulfur equivalent shall be the sum of the SO_2 and TRS concentrations, after being converted to sulfur equivalents. For each run and each of the test methods specified in this paragraph (c) of this section, the sampling time shall be at least 4 hours. Method 1 shall be used to select the sampling site. The sampling point in the duct shall be at the centroid of the cross-section if the area is less than 5 m^2 (54 ft^2) or at a point no closer to the walls than 1 m (39 in.) if the cross-sectional area is 5 m^2 or

more, and the centroid is more than 1 m (39 in.) from the wall.

(i) Method 6 shall be used to determine the SO_2 concentration. Eight samples of 20 minutes each shall be taken at 30-minute intervals. The arithmetic average in mg/dscm shall be the concentration for the run. The concentration in mg/dscm shall be multiplied by 0.5 to convert the results to sulfur equivalent.

(ii) Method 15 shall be used to determine the TRS concentration from reduction-type devices or where the oxygen content of the effluent gas is less than 1.0 percent by volume. The sampling rate shall be at least 3 liters/min (0.1 ft^3/min) to insure minimum residence time in the sample line. Sixteen samples shall be taken at 15-minute intervals. The arithmetic average of all the samples shall be the concentration for the run. The concentration in ppm TRS as H_2S shall be multiplied by 1.352×10^{-6} to convert the results to sulfur equivalent.

(iii) Method 16A shall be used to determine the TRS concentration from oxidation-type devices or where the oxygen content of the effluent gas is greater than 1.0 percent by volume. Eight samples of 20 minutes each shall be taken at 30-minute intervals. The arithmetic average shall be the concentration for the run. The concentration in ppm TRS as H_2S shall be multiplied by 1.352×10^{-6} to convert the results to sulfur equivalent.

(iv) Method 2 shall be used to determine the volumetric flow rate of the effluent gas. A velocity traverse shall be conducted at the beginning and end of each run. The arithmetic average of the two measurements shall be used to calculate the volumetric flow rate (Q_{sd}) for the run. For the determination of the effluent gas molecular weight, a single integrated sample over the 4-hour period may be taken and analyzed or grab samples at 1-hour intervals may be taken, analyzed, and averaged. For the moisture content, two samples of at least 0.10 dscm (0.35 dscf) and 10 minutes shall be taken at the beginning of the 4-hour run and near the end of the time period. The arithmetic average of the two runs shall be the moisture content for the run.

(d) To comply with § 60.646(d), the owner or operator shall obtain the information required by using the monitoring devices in paragraph (b) of (c) of this section.

[54 FR 6679, Feb. 14, 1989]

§ 60.645 [Reserved]

§ 60.646 Monitoring of emissions and operations.

(a) The owner or operator subject to the provisions of § 60.642 (a) or (b) shall install, calibrate, maintain, and operate monitoring devices or perform measurements to determine the following operations information on a daily basis:

(1) The accumulation of sulfur product over each 24-hour period: The monitoring method may incorporate the use of an instrument to measure and record the liquid sulfur production rate, or may be a procedure for measuring and recording the sulfur liquid levels in the storage tanks with a level indicator or by manual soundings, with subsequent calculation of the sulfur production rate based on the tank geometry, stored sulfur density, and elapsed time between readings. The method shall be designed to be accurate within ±2 percent of the 24-hour sulfur accumulation.

(2) The H_2S concentration in the acid gas from the sweetening unit for each 24-hour period: At least one sample per 24-hour period shall be collected and analyzed using the method specified in § 60.644(b)(1). The Administrator may require the owner or operator to demonstrate that the H_2S concentration obtained from one or more samples over a 24-hour period is within ±20 percent of the average of 12 samples collected at equally spaced intervals during the 24-hour period. In instances where the H_2S concentration of a single sample is not within ±20 percent of the average of the 12 equally spaced samples, the Administrator may require a more frequent sampling schedule.

(3) The average acid gas flow rate from the sweetening unit: The owner or operator shall install and operate a monitoring device to continuously measure the flow rate of acid gas. The monitoring device reading shall be recorded at least once per hour during

each 24-hour period. The average acid gas flow rate shall be computed from the individual readings.

(4) The sulfur feed rate (X): For each 24-hour period, X shall be computed using the equation in § 60.644(b)(3).

(5) The required sulfur dioxide emission reduction efficiency for the 24-hour period: The sulfur feed rate and the H_2S concentration in the acid gas for the 24-hour period as applicable, shall be used to determine the required reduction efficiency in accordance with the provisions of § 60.642(b).

(b) Where compliance is achieved through the use of an oxidation control system or a reduction control system followed by a continually operated incineration device, the owner or operator shall install, calibrate, maintain, and operate monitoring devices and continuous emission monitors as follows:

(1) A continuous monitoring system to measure the total sulfur emission rate (E) of SO_2 in the gases discharged to the atmosphere. The SO_2 emission rate shall be expressed in terms of equivalent sulfur mass flow rates (kg/hr). The span of this monitoring system shall be set so that the equivalent emission limit of § 60.642(b) will be between 30 percent and 70 percent of the measurement range of the instrument system.

(2) Except as provided in paragraph (b)(3) of this section: A monitoring device to measure the temperature of the gas leaving the combustion zone of the incinerator, if compliance with § 60.642(a) is achieved through the use of an oxidation control system or a reduction control system followed by a continually operated incineration device. The monitoring device shall be certified by the manufacturer to be accurate to within ±1 percent of the temperature being measured.

When performance tests are conducted under the provision of § 60.8 to demonstrate compliance with the standards under § 60.642, the temperature of the gas leaving the incinerator combustion zone shall be determined using the monitoring device. If the volumetric ratio of sulfur dioxide to sulfur dioxide plus total reduced sulfur (expressed as SO_2) in the gas leaving the incinerator is $\leqq 0.98$, then temperature monitoring may be used to demonstrate that sulfur dioxide emission monitoring is sufficient to determine total sulfur emissions. At all times during the operation of the facility, the owner or operator shall maintain the average temperature of the gas leaving the combustion zone of the incinerator at or above the appropriate level determined during the most recent performance test to ensure the sulfur compound oxidation criteria are met. Operation at lower average temperatures may be considered by the Administrator to be unacceptable operation and maintenance of the affected facility. The owner or operator may request that the minimum incinerator temperature be reestablished by conducting new performance tests under § 60.8.

(3) Upon promulgation of a performance specification of continuous monitoring systems for total reduced sulfur compounds at sulfur recovery plants, the owner or operator may, as an alternative to paragraph (b)(2) of this section, install, calibrate, maintain, and operate a continuous emission monitoring system for total reduced sulfur compounds as required in paragraph (d) of this section in addition to a sulfur dioxide emission monitoring system. The sum of the equivalent sulfur mass emission rates from the two monitoring systems shall be used to compute the total sulfur emission rate (E).

(c) Where compliance is achieved through the use of a reduction control system not followed by a continually operated incineration device, the owner or operator shall install, calibrate, maintain, and operate a continuous monitoring system to measure the emission rate of reduced sulfur compounds as SO_2 equivalent in the gases discharged to the atmosphere. The SO_2 equivalent compound emission rate shall be expressed in terms of equivalent sulfur mass flow rates (kg/hr). The span of this monitoring system shall be set so that the equivalent

emission limit of §60.642(b) will be between 30 and 70 percent of the measurement range of the system. This requirement becomes effective upon promulgation of a performance specification for continuous monitoring systems for total reduced sulfur compounds at sulfur recovery plants.

(d) For those sources required to comply with paragraph (b) or (c) of this section, the average sulfur emission reduction efficiency achieved (R) shall be calculated for each 24-hour clock internal. The 24-hour interval may begin and end at any selected clock time, but must be consistent. The 24-hour average reduction efficiency (R) shall be computed based on the 24-hour average sulfur production rate (S) and sulfur emission rate (E), using the equation in §60.644(c)(1).

(1) Data obtained from the sulfur production rate monitoring device specified in paragraph (a) of this section shall be used to determine S.

(2) Data obtained from the sulfur emission rate monitoring systems specified in paragraphs (b) or (c) of this section shall be used to calculate a 24-hour average for the sulfur emission rate (E). The monitoring system must provide at least one data point in each successive 15-minute interval. At least two data points must be used to calculate each 1-hour average. A minimum of 18 1-hour averages must be used to compute each 24-hour average.

(e) In lieu of complying with (b) or (c) of this section, those sources with a design capacity of less than 150 LT/D of H_2S expressed as sulfur may calculate the sulfur emission reduction efficiency achieved for each 24-hour period by:

$$R = \frac{0.0236\,S}{X}(100\ \text{percent})$$

Where:

R= the sulfur dioxide removal efficiency achieved during the 24-hour period, percent;

S= the sulfur production rate during the 24-hour period, kg/hr;

X= the sulfur feed rate in the acid gas, LT/D; and 0.0236= conversion factor, LT/D per kg/hr.

(f) The monitoring devices required in paragraphs (b)(1), (b)(3) and (c) of this section shall be calibrated at least annually according to the manufacturer's specifications, as required by §60.13(b).

(g) The continuous emission monitoring systems required in paragraphs (b)(1), (b)(3), and (c) of this section shall be subject to the emission monitoring requirements of §60.13 of the General Provisions. For conducting the continuous emission monitoring system performance evaluation required by §60.13(c), Performance Specification 2 shall apply, and Method 6 shall be used for systems required by paragraph (b) of this section.

[50 FR 40160, Oct. 1, 1985, as amended at 54 FR 6680, Feb. 14, 1989]

§60.647 Recordkeeping and reporting requirements.

(a) Records of the calculations and measurements required in §60.642 (a) and (b) and §60.646 (a) through (g) must be retained for at least 2 years following the date of the measurements by owners and operators subject to this subpart. This requirement is included under §60.7(d) of the General Provisions.

(b) Each owner or operator shall submit a written report of excess emissions to the Administrator semiannually. For the purpose of these reports, excess emissions are defined as:

(1) Any 24-hour period (at consistent intervals) during which the average sulfur emission reduction efficiency (R) is less than the minimum required efficiency (Z).

(2) For any affected facility electing to comply with the provisions of §60.646(b)(2), any 24-hour period during which the average temperature of the gases leaving the combustion zone of an incinerator is less than the appropriate operating temperature as determined during the most recent performance test in accordance with the provisions of §60.646(b)(2). Each 24-hour period must consist of at least 96 temperature measurements equally spaced over the 24 hours.

(c) To certify that a facility is exempt from the control requirements of these standards, each owner or operator of a facility with a design capacity less that 2 LT/D of H_2S in the acid gas (expresssed as sulfur) shall keep, for the life of the facility, an analysis

demonstrating that the facility's design capacity is less than 2 LT/D of H_2S expressed as sulfur.

(d) Each owner or operator who elects to comply with §60.646(e) shall keep, for the life of the facility, a record demonstrating that the facility's design capacity is less than 150 LT/D of H_2S expressed as sulfur.

(e) The requirements of paragraph (b) of this section remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of obligation to comply with paragraph (b) of this section, provided that they comply with the requirements established by the State.

§ 60.648 Optional procedure for measuring hydrogen sulfide in acid gas—Tutwiler Procedure.[1]

(a) When an instantaneous sample is desired and H_2S concentration is ten grains per 1000 cubic foot or more, a 100 ml Tutwiler burette is used. For concentrations less than ten grains, a 500 ml Tutwiler burette and more dilute solutions are used. In principle, this method consists of titrating hydrogen sulfide in a gas sample directly with a standard solution of iodine.

(b) *Apparatus.* (See Figure 1.) A 100 or 500 ml capacity Tutwiler burette, with two-way glass stopcock at bottom and three-way stopcock at top which connect either with inlet tubulature or glass-stoppered cylinder, 10 ml capacity, graduated in 0.1 ml subdivision; rubber tubing connecting burette with leveling bottle.

(c) *Reagents.* (1) Iodine stock solution, 0.1N. Weight 12.7 g iodine, and 20 to 25 g cp potassium iodide for each liter of solution. Dissolve KI in as little water as necessary; dissolve iodine in concentrated KI solution, make up to proper volume, and store in glass-stoppered brown glass bottle.

(2) Standard iodine solution, 1 ml=0.001771 g I. Transfer 33.7 ml of above 0.1N stock solution into a 250 ml volumetric flask; add water to mark and mix well. Then, for 100 ml sample of gas, 1 ml of standard iodine solution is equivalent to 100 grains H_2S per cubic feet of gas.

(3) Starch solution. Rub into a thin paste about one teaspoonful of wheat starch with a little water; pour into about a pint of boiling water; stir; let cool and decant off clear solution. Make fresh solution every few days.

(d) *Procedure.* Fill leveling bulb with starch solution. Raise (L), open cock (G), open (F) to (A), and close (F) when solutions starts to run out of gas inlet. Close (G). Purge gas sampling line and connect with (A). Lower (L) and open (F) and (G). When liquid level is several ml past the 100 ml mark, close (G) and (F), and disconnect sampling tube. Open (G) and bring starch solution to 100 ml mark by raising (L); then close (G). Open (F) momentarily, to bring gas in burette to atmospheric pressure, and close (F). Open (G), bring liquid level down to 10 ml mark by lowering (L). Close (G), clamp rubber tubing near (E) and disconnect it from burette. Rinse graduated cylinder with a standard iodine solution (0.00171 g I per ml); fill cylinder and record reading. Introduce successive small amounts of iodine thru (F); shake well after each addition; continue until a faint permanent blue color is obtained. Record reading; subtract from previous reading, and call difference D.

(e) With every fresh stock of starch solution perform a blank test as follows: introduce fresh starch solution into burette up to 100 ml mark. Close (F) and (G). Lower (L) and open (G). When liquid level reaches the 10 ml mark, close (G). With air in burette, titrate as during a test and up to same end point. Call ml of iodine used C. Then,

$$\text{Grains } H_2S \text{ per 100 cubic foot of gas} = 100\ (D—C)$$

(f) Greater sensitivity can be attained if a 500 ml capacity Tutwiler burette is used with a more dilute (0.001N) iodine solution. Concentrations less than 1.0 grains per 100 cubic foot can be determined in this way. Usually, the

[1] Gas Engineers Handbook, Fuel Gas Engineering Practices, The Industrial Press, 93 Worth Street, New York, NY, 1966, First Edition, Second Printing, page 6/25 (Docket A–80–20–A, Entry II–I–67).

starch-iodine end point is much less distinct, and a blank determination of end point, with H_2S-free gas or air, is required.

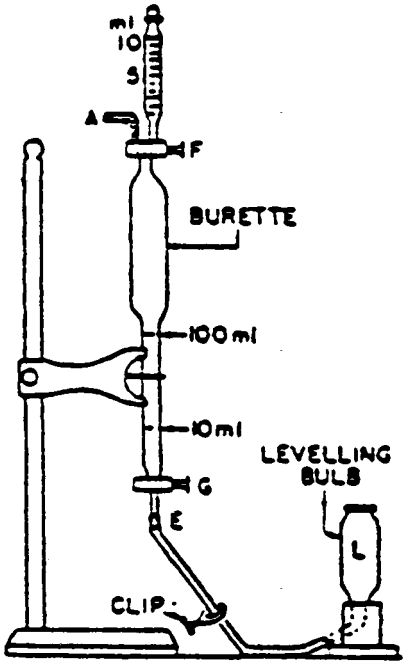

Figure 1. Tutwiler burette (lettered items mentioned in text).

Subpart MMM [Reserved]

Subpart NNN—Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations

SOURCE: 55 FR 26942, June 29, 1990, unless otherwise noted.

§ 60.660 Applicability and designation of affected facility.

(a) The provisions of this subpart apply to each affected facility designated in paragraph (b) of this section that is part of a process unit that produces any of the chemicals listed in § 60.667 as a product, co-product, by-product, or intermediate, except as provided in paragraph (c).

(b) The affected facility is any of the following for which construction, modification, or reconstruction commenced after December 30, 1983:

(1) Each distillation unit not discharging its vent stream into a recovery system.

(2) Each combination of a distillation unit and the recovery system into which its vent stream is discharged.

(3) Each combination of two or more distillation units and the common recovery system into which their vent streams are discharged.

(c) Exemptions from the provisions of paragraph (a) of this section are as follows:

(1) Any distillation unit operating as part of a process unit which produces coal tar or beverage alcohols, or which uses, contains, and produces no VOC is not an affected facility.

(2) Any distillation unit that is subject to the provisions of Subpart DDD is not an affected facility.

(3) Any distillation unit that is designed and operated as a batch operation is not an affected facility.

(4) Each affected facility that has a total resource effectiveness (TRE) index value greater than 8.0 is exempt from all provisions of this subpart except for §§ 60.662; 60.664 (d), (e), and (f); and 60.665 (h) and (l).

(5) Each affected facility in a process unit with a total design capacity for all chemicals produced within that unit of less than one gigagram per year is exempt from all provisions of this subpart except for the recordkeeping and reporting requirements in paragraphs (j), (l)(6), and (n) of § 60.665.

(6) Each affected facility operated with a vent stream flow rate less than 0.008 scm/min is exempt from all provisions of this subpart except for the test method and procedure and the recordkeeping and reporting requirements in § 60.664(g) and paragraphs (i), (l)(5), and (o) of § 60.665.

[NOTE: The intent of these standards is to minimize the emissions of VOC through the application of best demonstrated technology (BDT). The numerical emission limits in these standards are expressed in terms of total organic compounds (TOC), measured as